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⑫ EUROPEAN PATENT APPLICATION

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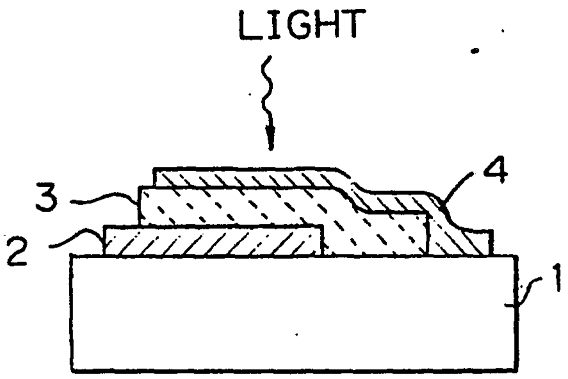
(54) Amorphous silicon photodiode and method of producing the same.

(57) An amorphous silicon photodiode comprising a substrate (1); a lower electrode (2) formed on the substrate; an amorphous silicon layer (3) made of i-type hydrogenated amorphous silicon (i-a-Si:H) having a carbon content of 1×10^{18} atom/cm^3 or less and formed on the lower electrode; and an upper electrode (4) formed on the amorphous silicon layer. The photodiode has an improved ratio of residual current to current generated under light illumination of 1% or less.

Fig. I



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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
D,Y	Materials Research Society Symposia Proceedings vol. 49, 1985, New York pages 423 - 428; S.Kaneko et al.: "Amorphous Si:H heterojunction photodiode and its application to a compact scanner" * pages 423 - 425; figures 1, 3 *	1-4	H01L31/09 H01L31/20 H01L31/101 H01L31/0288 C23C16/24 C23C16/50
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Y	SOLAR CELLS. vol. 24, no. 3-4, August 1988, LAUSANNE CH pages 287 - 297; J.D.Cohen et al.: "Junction capacitance studies of deep defects in undoped hydrogenated amorphous silicon" - Paper presented at the 8th Photovoltaic ... Meeting, 15-18 November 1987 * abstract * * section 3 and 6; table 1 * ----	1-4	
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Y	SOLAR CELLS. vol. 19, no. 2, December 1986, LAUSANNE CH pages 179 - 188; C.R.Dickson et al.: "Amorphous silicon solar cell modules fabricated with a single-chamber load-lock deposition system" * abstract; figure 2 * section 3 *	6	H01L C23C
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	02 AUGUST 1990	MUNNIX, S

CATEGORY OF CITED DOCUMENTS

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A	Photovoltaic Power Generation, Proc. 2nd Contractors' Meeting, Hamburg, 16-18 September 1987 Kluwer Acad. Publ., Dordrecht pages 131 - 136; L.J.M.Guimaraes et al.: "Electro-optical properties of a-Si:H ... undoped and doped films produced by a TCDDC system" * page 132 * ---	7	
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